HELIOS RENEWABLE ENERGY PROJECT

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Pursuant to:
APFP Regulation 5(2)(a)

Environmental Statement Chapter 5: Construction and Decommissioning Methodology and Phasing

June 2024

5. Construction and Decommissioning Methodology and Programme

5.1.1. This chapter is supported by the following appendices:

- **Appendix 5.1 Outline Construction Environmental Management Plan [EN010140/APP/6.3.5.1]**;
- **Appendix 5.2 Outline Construction Traffic Management Plan [EN010140/APP/6.3.5.2]**;
- **Appendix 5.3 Outline Decommissioning Environmental Management Plan [EN010140/APP/6.3.5.3]**; and
- **Appendix 5.4 Outline Operational Environmental Management Plan [EN010140/APP/6.3.5.4].**

5.1.2. This chapter is not supported by any figures.

5.2. Construction Activity

5.2.1. The construction of the Proposed Development is anticipated to comprise a 12 month period commencing no earlier than 2027 and with completion of the Proposed Development in 2029.

5.2.2. The activities on-Site during the construction phase are expected to include the following:

- Site establishment and enabling works:
  - Ground clearance, where necessary;
  - Installation of security lighting and CCTV;
  - Delivery of construction materials, plant and equipment;
  - Establishment of security fencing;
  - Establishment of construction compounds including storage and welfare facilities;

- Construction of internal access roads;
- Setting out the positions for the infrastructure and equipment; and
- Trenching for cable routes.

- Construction of the Proposed Development:
  - Piling and installation of solar PV array foundations;
  - Construction of on-Site electrical infrastructure to facilitate the generation of electricity such as solar PV frames and panels, 132kV substation and BESS;
  - Laying of cables including PoC cable groundworks and string cabling between the solar PV array;
  - PoC electrical works;
  - Installation of fencing and gates;
  - Final installation checks;
  - Testing and commissioning;
  - Site clearance and compound removal; and
  - Habitat creation, landscape planting and ecological enhancements.

5.2.3. The plant and equipment anticipated to be used for the activities outlined above are as follows:

- Digger;
- Tractor with trailer;
- Tractor with hedge cutter;
- Compactor;
- Piling rig;
- Mobile crane;
- Cement mixer; and

- A four wheel drive vehicle with trailer.

Working Hours

5.2.4. In line with NYC's guidance for construction sites[1], works will take place between the following hours:

- Monday to Friday: 8am to 6pm;
- Saturday: 8am to 1pm; and
- Sunday and Bank Holidays: no work.

5.2.5. Should works be required outside of these hours, this would be agreed with NYC.

Site Access

5.2.6. Vehicle access to the Site during the construction phase of the Proposed Development will be from two access and egress points (at fields 12 and 18/19 on **Figure 3.1 Field Boundaries Plan [EN010140/APP/6.2.3.1]**) on the A1041 at the north eastern boundary of the Site, as shown on **Figure 3.2 Parameter Plan [EN010140/APP/6.2.3.2]**).

5.2.7. Table 5.1 shows the anticipated construction vehicle movements as assessed in **Chapter 10 Transport and Access [EN010140/APP/6.1.10]** of the ES.

Table 5.1: Construction Traffic Flows

Construction Activity	Solar PV and BESS Elements of the Proposed Development	Grid Connection Element of the Proposed Development	Total
Average Arrivals per Day	13	5	18
Average Movements per Day (Arrivals + Departures)	26	10	36
Average Arrivals per Day (Peak Period – Plus 50%)	19	7	26
Average	38	14	52

1 North Yorkshire Council, *Noise from construction and demolition site* Available at: https://www.northyorks.gov.uk/environment-and-neighbourhoods/pollution/noise-pollution/noise-construction-and-demolition-sites#:~:text=Work%20should%20normally%20take%20place,and%20bank%20holidays%3A%20no%20work Accessed: August 2023

Table 5.1: Construction Traffic Flows

Construction Activity	Solar PV and BESS Elements of the Proposed Development	Grid Connection Element of the Proposed Development	Total
Movements per Day (Peak Period – Plus 50%)			

5.2.8. For the solar PV and BESS elements, it is anticipated that the construction phase will require a maximum of 200 workers per day during the peak construction period, and 150 construction workers per day on an average day. For the grid connection and cable, 10 construction workers are anticipated across the average and peak days.

5.2.9. Deliveries to the Site, and construction worker shifts changes, will be coordinated via the detailed Construction Traffic Management Plan ('CTMP') so as to avoid the traditional AM peak hour (8am to 9am) and PM peak hour (5pm to 6pm).

Drainage

5.2.10. All site works will be undertaken in accordance with CIRIA (2001) Control of Water Pollution from Construction Sites[2] which promotes environmental good practice for control of water pollution arising from construction activities. Construction vehicles will be properly maintained to reduce the risk of hydrocarbon contamination and will only be active when required. Construction materials will be stored, handled, and managed with due regard to the sensitivity of the local water environment and thus the risk of accidental spillage or release will be minimised.

5.2.11. In accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001, any tanks storing more than 200 litres of oil will have secondary bunding. Bunding will be specified as having a minimum capacity of "*not less than 110% of the container's storage capacity or, if there is more than one container within the system, of not less than 110% of the largest container's storage capacity or 25% of their aggregate storage capacity, whichever is the greater*." Any above ground storage tanks will be located on a designated area of hardstanding. No underground storage tanks will be used during the construction period. Storage of liquids such as

[2] The Control of Pollution (Oil Storage) (England) Regulations 2001

degreasers, solvents, lubricants and paints will be in segregated, bunded enclosures.

5.2.12. The construction drainage system will be designed and managed to comply with BS6031 "*The British Standard Code of Practice for Earthworks*"[3], which details methods that should be considered for the general control of drainage on construction sites. Further regard will be given to the Geotechnical Design at the detailed design stage, General Rules (BS EN 1997)[4] which should be read in conjunction with Basis of Structural Design (BE EN 1990)[5].

Underground Cable Corridor

5.2.13. The underground cable corridor will be buried in trenches and will be undertaken in accordance with the Outline Soil Management Plan ('oSMP') provided in **Appendix 14.3 [EN010140/APP/6.3.14.3].**

5.2.14. Trenchless methods will be employed to allow the grid connection cables to be installed under the railway near Drax Power Station (details will be secured through a DCO requirement), existing belowground utility infrastructure and watercourses, and IDB maintained ordinary watercourse. The width of the trenchless drilling area is expected to be 1.2m subject to ground conditions. The maximum depth will be up to 10m below ground level but will be dependent on ground conditions, borehole entry and exit positions and requirements of the railway owner/operator. The contractor will establish a 50m x 50m working compound on each side of the working sections.

5.2.15. During construction, access to the existing PRoWs will be maintained, however should temporary closures be required to enable works associated with the underground cable corridor and to ensure the safety of PRoW users, these will be for a short period and alternate routes will be provided.

Construction Compounds

5.2.16. As discussed in **Chapter 3 Site and Development Description [EN010140/APP/6.1.3]**) of the ES, during the construction and decommissioning phases, two primary construction compound will be required with up to five secondary construction compound(s) provided throughout the Site; all compounds will be

[3] British Standards Institution (December 2009) BS6031:2009 Code of Practice for Earthworks
[4] British Standards Institution (December 2004) BS EN 1997-1:2004 Eurocode 7. Geotechnical Design. General Rules.
[5] British Standards Institution (2002) BS EN 1990: 2002 Basis of Structural Design

temporary and removed upon the completion of the construction phase. The primary construction compounds will provide office space, welfare units, canteen, storage and waste disposal, parking area and HGV turning area, whilst the secondary compounds will comprise storage space, parking area and HGV turning area, and welfare units.

5.2.17. The primary compounds will be located near to the Site's two access/ egress point at the eastern boundary to limit the distance travelled by delivery vehicles once exiting the A1041. The location of the secondary compounds will be fixed during the detailed design phase; these compounds will be appropriately sited so as to avoid sensitive receptors.

Controls to Protect the Environment

5.2.18. The environmental controls (or mitigation measures) to eliminate, reduce or offset likely significant adverse effects on the environment during the construction phase are identified below:

- An Outline Construction Environmental Management Plan ('oCEMP') (refer to **Appendix 5.1 [EN010140/APP/6.3.5.1]**) of the ES details the environmental controls and best practice to minimise any adverse effects;
- An Outline Construction Traffic Management Plan ('oCTMP') is provided at A**ppendix 5.2 [EN010140/APP/6.3.5.2]**, and will regulate the delivery of materials and movement of construction personnel to the Site during the construction phase;
- The Detailed CEMP and Detailed CTMP will be submitted to NYC for approval prior to the commencement of development on-Site The detailed CEMP and CTMP will be written and secured by DCO requirement in order to manage potential environmental effects during the construction phase.;
- Requirement to comply with the detailed CEMP and CTMP. All contractors will be required to comply with the content of the detailed CEMP and CTMP and any DCO requirements;
- In respect of necessary departures from the above, procedures for prior notification to NYC, as appropriate, and affected parties will be established;
- Establishing a dedicated point of contact and assigning responsibility to deal with construction related issues if they arise. This will be a named representative from

the construction team; and

- Regular dialogue will be maintained with NYC and the local community.

5.2.19. The detailed CEMP will include the following:

- Site Information: including environmental management structure, roles and responsibilities, location of any potentially sensitive receptors such as trees, watercourses and local residents, primary contact in working hours, and emergency details outside of working hours;
- Construction Information: a description of the works and potential mitigation/ optimisation measures, construction programme, working hours, details of haulage routes and equipment to be used;
- Environmental Management: details of the audit programme, methods for managing environmental risks and reducing effects, emergency procedures, remediation of spillages, waste and hazardous materials storage procedures, and specific management and monitoring plans relating to drainage, water resources, archaeology, dust, landscape, lighting and noise;
- Communications Plan: liaison with the local neighbourhood, complaints process, prior notice requirements; and
- Monitoring: procedures for recording and reporting monitoring results and taking remedial action in the event of any non-compliance, details of receptors, threshold values and analysis methods. All contractors will be required to complete a method statement and risk assessment prior to commencement on Site.

5.3. Decommissioning Phase

5.3.1. Following cessation of energy generation and exportation at the Site, all solar PV modules, mounting structure, cabling (within the Solar Farm, Substation and BESS compound and Underground Cable Corridor Zones), inverters and transformers will be removed and recycled, or disposed of in accordance with good practice and market conditions at that time.

5.3.2. The decommissioning of the Proposed Development is anticipated to take approximately 12 months. During the decommissioning phase, all the solar infrastructure including PV modules, mounting structures, cabling on or near to the

surface of developable areas (i.e. roads), inverters stations, fencing and ancillary infrastructure, and the substation and BESS compound would be removed and recycled or disposed of in accordance with good practice available at the time and following the waste hierarchy. It is expected that the compounds and temporary access tracks will be removed once decommissioning is complete.

Controls to Protect the Environment

5.3.3. The Site would be reinstated in accordance with a Decommissioning Environmental Management Plan ('DEMP'). An outline DEMP ('oDEMP') is provided at **Appendix 5.3 [EN010140/APP/6.3.5.3]** with which the detailed DEMP will accord. The detailed DEMP will reflect the information provided in the detailed CEMP (as listed above), adjusted for the decommissioning phase, and will be secured by DCO requirement.

5.3.4. The detailed DEMP will be submitted to NYC for approval prior to the commencement of decommissioning phase on-Site. The detailed DEMP will be written and secured by DCO requirement in order to manage potential environmental effects during the decommissioning phase.

Controls to Protect the Environment during the Operational Phase

5.3.5. An outline Operational Environmental Management Plan ('oOEMP') is provided at **Appendix 5.4 [EN010140/APP/6.3.5.4]**, from which a detailed OEMP will be written and secured by DCO requirement in order to manage potential environmental effects during the operational phase.